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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA-2020-0100; Notice 2]

Nissan North America, Inc., Denial of Petition for Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Denial of petition.

SUMMARY: Nissan North America, Inc. (Nissan) has determined that certain model year (MY) 2020 Nissan Sentra motor vehicles do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 108, *Lamps, Reflective Devices, and Associated Equipment*. Nissan filed a noncompliance report dated August 26, 2020. Nissan subsequently petitioned NHTSA on September 18, 2020, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety. This notice announces the denial of Nissan's petition.

FOR FURTHER INFORMATION CONTACT: Leroy Angeles, Office of Vehicle Safety Compliance, NHTSA, telephone (202) 366-5304.

SUPPLEMENTARY INFORMATION:

I. Overview:

Nissan has determined that certain MY 2020 Nissan Sentra motor vehicles do not fully comply with the requirements of paragraph S10.18.9.1.2 of FMVSS No. 108, *Lamps, Reflective Devices, and Associated Equipment* (49 CFR 571.108). Nissan filed a noncompliance report dated August 26, 2020, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports*. Nissan subsequently petitioned NHTSA on September 18, 2020, for an exemption from the notification and remedy requirements of 49 U.S.C. chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C.

30118(d) and 30120(h) and 49 CFR part 556, *Exemption for Inconsequential Defect or Noncompliance*.

Notice of receipt of Nissan's petition was published with a 30-day public comment period, on March 24, 2021, in the **Federal Register** (86 FR 15769). One comment was received. To view the petition and all supporting documents log onto the Federal Docket Management System (FDMS) website at https://www.regulations.gov/. Then follow the online search instructions to locate docket number "NHTSA-2020-0100."

II. Motor Vehicles Involved:

Approximately 5,520 MY 2020 Nissan Sentra motor vehicles, manufactured between November 26, 2019, and March 24, 2020, are potentially involved.

III. Noncompliance:

Nissan explains that the noncompliance is that the right-hand LED headlamp aim in the subject vehicle may be misaligned resulting in a vertical gradient value less than 0.13 as required by paragraph S10.18.9.1.2 of FMVSS No. 108.

IV. Rule Requirements:

Paragraph S10.18.9.1.2 of FMVSS No. 108 includes the requirements relevant to this petition: *Vertical gradient.* The gradient of the cutoff measured at either 2.5° L or 2.0° R must be not less than 0.13 based on the procedure of S10.18.9.1.5.

V. Summary of Nissan's Petition:

The following views and arguments presented in this section are the views and arguments provided by Nissan and do not reflect the views of the Agency. In its petition, Nissan describes the subject noncompliance and contends that the noncompliance is inconsequential as it relates to motor vehicle safety.

In support of its petition, Nissan provided NHTSA with the following:

1. Nissan states that "the supplier (Ichikoh) did not apply the correct aiming logic when setting the head lamp aim parameters" in the subject vehicles and, "[a]s a

result, the right-hand LED headlamp aim may be misaligned resulting in a vertical gradient value below 0.13." Nissan states that "[a] lower G-Value will lead to a headlamp cut line that is slightly less sharp." According to Nissan, "Ichikoh inspected 3,506 lamps and found 572 lamps with a G-Value below 0.13. However, when the cut-off value is brought down to two decimals instead of three (per the express requirement in FMVSS No. 108), only 286 of the 3,506 lamps (about 8%) fall below the 0.13 minimum threshold. Of the 286 lamps, 248 (about 87%) are at a gradient value of 0.12."

2. According to Nissan, Ichikoh confirmed that, "even when the G-Value is below 0.13, all points of the Light Distribution achieve the required specifications of FMVSS 108 for both the low and high beam performance." Nissan attached to its petition test data from Ichikoh regarding such photometric performance.
3. Nissan states that it "has not received any reports from the field of customer complaints, warranty claims, crashes, injuries, or fatalities related to this issue."
4. Nissan contends that "[t]he purpose of the gradient requirement is to assist in headlamp re-aiming." Nissan states that "[t]he vehicles potentially affected by this issue were aimed properly at the factory using a different aiming method. Therefore, the only potential concern would relate to re-aiming performed after the vehicle has been in use." Nissan stated that "[a]iming of the headlamps by a service technician in the field is an event that is expected to occur infrequently. To confirm this, Nissan searched its repair order database for repair orders on the previous generation Sentra that involved re-aiming of the headlamps. Out of 1,389,330 vehicles, 161 repair orders were found that involved headlamp aiming. This rate of repair would be 0.011% of vehicles. If the same rate of repair is applied to the expected 420 vehicles in the subject population [Nissan] would

expect only 0.05 vehicles of the subject population to require a re-aiming in the field."

5. Nissan asserts that "[t]he difference in gradient values between 0.12 and 0.13 does not materially affect the ability of a service technician to properly aim the lamp in the rare case that this would need to be done in the field."
6. "Even if the lamps had to be re-aimed at some point," according to Nissan, "it is unlikely the driver or other motorists would notice any glare or observable difference in operation between a fully compliant lamp and the subject lamps based on the conditions described above."

Nissan concludes that the subject noncompliance is inconsequential as it relates to motor vehicle safety, and that its petition to be exempted from providing notification of the noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliance, as required by 49 U.S.C. 30120, should be granted.

VI. Public Comment:

NHTSA received one comment from the general public. The commenter explains that they have owned vehicles manufactured by Nissan and states that the noncompliance is not inconsequential. The comment does not, however, substantively address issues relevant to Nissan's petition with any specificity.

VII. NHTSA's Analysis:

A. General Principles

The burden of establishing the inconsequentiality of a failure to comply with a *performance requirement* in a standard—as opposed to a *labeling requirement with no performance implications*—is more substantial and difficult to meet. Accordingly, the Agency has not found many such noncompliances inconsequential.[1]

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[1] *Cf. Gen. Motors Corporation; Ruling on Petition for Determination of Inconsequential Noncompliance*, 69 FR 19897, 19899 (Apr. 14, 2004) (citing prior cases where noncompliance was expected to be imperceptible, or nearly so, to vehicle occupants or approaching drivers).

In determining inconsequentiality of a noncompliance, NHTSA focuses on the safety risk to individuals who experience the type of event against which a recall would otherwise protect.[2] In general, NHTSA does not consider the absence of complaints or injuries to show that the issue is inconsequential to safety. The absence of complaints does not mean vehicle occupants have not experienced a safety issue, nor does it mean that there will not be safety issues in the future.[3]

Arguments that only a small number of vehicles or items of motor vehicle equipment are affected also do not justify granting an inconsequentiality petition.[4] Similarly, mere assertions that only a small percentage of vehicles or items of equipment are likely to actually exhibit a noncompliance are unpersuasive. The percentage of potential occupants that could be adversely affected by a noncompliance is not relevant to whether the noncompliance poses an inconsequential risk to safety. Rather, NHTSA focuses on the consequence to an occupant who is exposed to the consequence of that noncompliance.[5] Indeed, the very purpose of a recall is to protect individuals from risk. *Id.*

B. NHTSA's Response to Nissan's Petition

NHTSA has evaluated the merits of Nissan's petition and has decided to deny the petition.

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[2] *See Gen. Motors, LLC; Grant of Petition for Decision of Inconsequential Noncompliance*, 78 FR 35355 (June 12, 2013) (finding noncompliance had no effect on occupant safety because it had no effect on the proper operation of the occupant classification system and the correct deployment of an air bag); *Osram Sylvania Prods. Inc.; Grant of Petition for Decision of Inconsequential Noncompliance*, 78 FR 46000 (July 30, 2013) (finding occupant using noncompliant light source would not be exposed to significantly greater risk than occupant using similar compliant light source).

[3] *See Morgan 3 Wheeler Limited; Denial of Petition for Decision of Inconsequential Noncompliance*, 81 FR 21663, 21666 (Apr. 12, 2016); *see also United States v. Gen. Motors Corp.*, 565 F.2d 754, 759 (D.C. Cir. 1977) (finding defect poses an unreasonable risk when it "results in hazards as potentially dangerous as sudden engine fire, and where there is no dispute that at least some such hazards, in this case fires, can definitely be expected to occur in the future").

[4] *See Mercedes-Benz, U.S.A., L.L.C.; Denial of Application for Decision of Inconsequential Noncompliance,* 66 FR 38342 (July 23, 2001) (rejecting argument that noncompliance was inconsequential because of the small number of vehicles affected); *Aston Martin Lagonda Ltd.; Denial of Petition for Decision of Inconsequential Noncompliance*, 81 FR 41370 (June 24, 2016) (noting that situations involving individuals trapped in motor vehicles—while infrequent—are consequential to safety); *Morgan 3 Wheeler Ltd.; Denial of Petition for Decision of Inconsequential Noncompliance*, 81 FR 21663, 21664 (Apr. 12, 2016) (rejecting argument that petition should be granted because the vehicle was produced in very low numbers and likely to be operated on a limited basis).

[5] *See Gen. Motors Corp.; Ruling on Petition for Determination of Inconsequential Noncompliance*, 69 FR 19897, 19900 (Apr. 14, 2004); *Cosco Inc.; Denial of Application for Decision of Inconsequential Noncompliance*, 64 FR 29408, 29409 (June 1, 1999).

The purpose of the gradient requirement is to allow for proper aim of a visually/optically aimed headlamp. Failure to properly aim the headlamp can result in glare to surrounding vehicles or less down road visibility which can potentially lead to a crash.

Nissan states that the supplier did not apply the correct aiming logic when setting the headlamp aim parameters and, as a result, the headlamp aim may be misaligned resulting in a vertical gradient value less than 0.13. Nissan does not further describe the technical details surrounding the process that led to the noncompliance, and it is somewhat unclear as to what issue caused these lamps to have a gradient below that permitted by the standard. Generally, the Agency understands that vertical headlamp aim does not impact the value of the gradient calculation (the mathematical description of the change in intensity from one angular location to the next). The headlamp aim that is "misaligned" in the subject vehicles might be the horizontal aim, which is permanently set during the manufacturing process. A permanent horizontal misaim could result in the vertical scan line that is used in the gradient calculation to be measured in a location other than that intended by the beam pattern designer. In any case, the precise process failure that led to the noncompliance is not necessary in the Agency's analysis of the noncompliance impact on safety described below.

NHTSA reviewed the test data from Nissan's supplier, Ichikoh, regarding photometric performance of the lower beam and upper beam with G-values less than 0.13, and did not find it compelling. Nissan only provided one set of measurements for one lamp. In addition, their argument does not take into account the potential mis-aim which could be caused by the non-compliant gradient. Furthermore, while Nissan claimed that it is unlikely the driver or other motorists would notice any glare or observable difference in operation between a fully compliant lamp and the subject lamp, Nissan did not submit any data to support this claim.

NHTSA believes that any gradient less than the minimum requirement of 0.13 can affect the ability of the lamp to be properly aimed. As NHTSA has previously stated in the preamble to

a final rule amending FMVSS 108,[6] and as provided as background in its associated notice of proposed rulemaking,[7] the gradient is based on a +/-0.1 degree laboratory aim accuracy and a 0.25 degree field aim accuracy with confidence limits of +/-2 sigma. A University of Michigan Transportation Research Institute (UMTRI) study[8] provided the information needed to establish the necessary gradient within the defined confidence bounds. The Society of Automotive Engineers (SAE) Beam Pattern Task Force also conducted a study[9] regarding visually aimable headlamps in which they found the standard deviation of vertical aim to be smaller than the standard deviation in the UMTRI study. Based on the SAE Beam Pattern Task Force study, a NHTSA-established advisory committee for regulatory negotiation to develop recommended specifications for altering the lower beam patterns of FMVSS 108 concluded that a gradient of 0.13 would satisfy the committee's goal for field aim accuracy.[10] Nissan did not provide data to support that the subject headlamps meet the photometric requirements even when misaimed, which is the potential consequence of not meeting the gradient requirement.

NHTSA is also not persuaded by Nissan's contention that the noncompliance involved here does not have a safety impact because it is relatively rare for headlamps to be re-aimed. Nissan's data supporting this claim, which relied on dealer repair records for the previous generation Sentra, is not, in NHTSA's view, representative. As vehicles age and their warranties expire, consumers are less likely to have service performed at a dealership. Instances of headlight service at independent garages and body shops also would not be included in Nissan's survey. And in any event, as stated above, arguments that only a small number of vehicles or items of motor vehicle equipment are affected have also not justified granting an

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6 *Federal Motor Vehicle Safety Standards; Lamps, Reflective Devices and Associated Equipment; Final Rule*; 62 FR 10710 (Mar. 10, 1997).

7 *See Federal Motor Vehicle Safety Standards; Lamps, Reflective Devices and Associated Equipment; Notice of Proposed Rulemaking*, 61 FR 36334 (July 10, 1996).

8 *See Visual Aiming of European and U.S. Low-Beam Headlamps*, Report No. UMTRI–91–34, by Sivak, Flannagan, Chandra, and Gellatly (Nov. 1991), *available at* https://deepblue.lib.umich.edu/handle/2027.42/936

9 *See Harmonized Vehicle Headlamp Performance Requirements* (first issued Jan. 1, 1995), *available at* https://www.sae.org/standards/content/j1735_201102/.

10 The committee's consensus was reflected in NHTSA's final rule.

inconsequentiality petition. For similar reasons, also unpersuasive is the number of lamps that exhibit a G-Value less than the 0.13 minimum threshold, or that Nissan has not received any reports from the field of customer complaints, warranty claims, crashes, injuries, or fatalities related to this issue.

VIII. NHTSA's Decision:

In consideration of the foregoing, NHTSA has decided that Nissan has not met its burden of persuasion that the subject FMVSS No. 108 noncompliance is inconsequential to motor vehicle safety. Accordingly, Nissan's petition is hereby denied, and Nissan is obligated to provide notification of, and free remedy for, that noncompliance under 49 U.S.C. 30118 and 30120.

(Authority: 49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8)

Anne L. Collins,

Associate Administrator for Enforcement.

[FR Doc. 2022-07646 Filed: 4/8/2022 8:45 am; Publication Date: 4/11/2022]